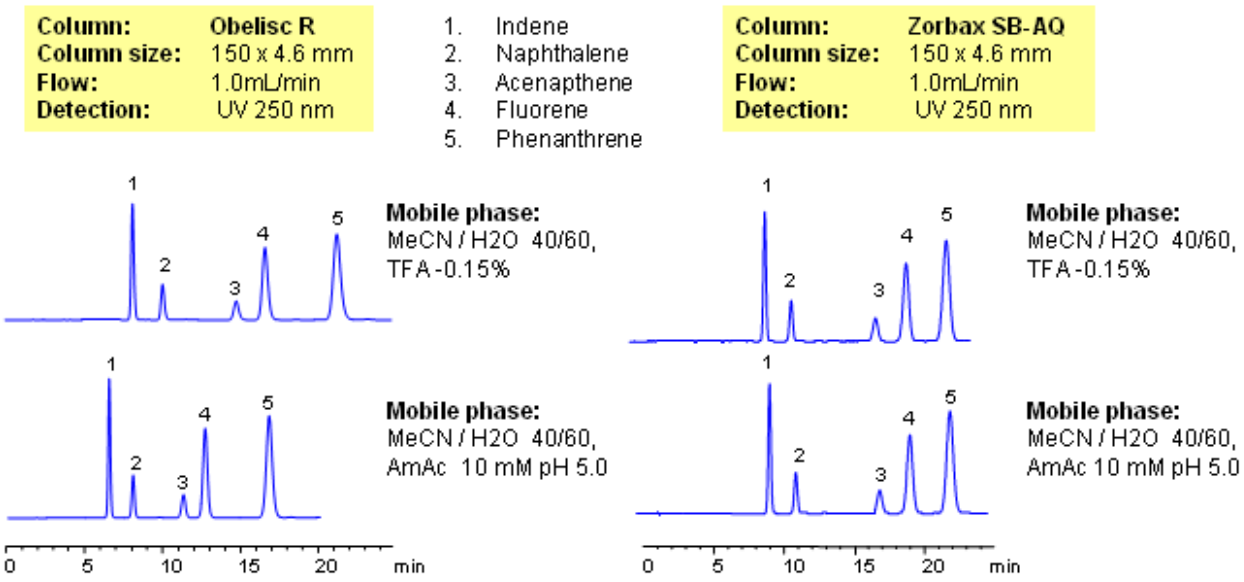
HPLC Separation of Aromatic Compounds (PAH) on Mixed-Mode and Reverse Phase Columns



Aromatic hydrocarbons are hydrophobic compounds which are well retained on any reverse column. Retention time is adjusted by the amount of ACN. Change in buffer concentration or buffer pH does not affect retention time. Method on Obelisc mixed-mode column shows retention and separation of PAHs by reverse phase mechanism. Change of pH is changing conformation and ionization of stationary phase on Obelisc R column, making it more or less hydrophobic. This changes interaction on the column and selectivity of separation. This method can be used for analysis of hydrophobic compounds and isomers by reverse phase mechanism, when fine tuning is required to achieve desired degree of separation.

SIELC has developed the Obelisc™ columns, which are mixed-mode and utilize Liquid Separation Cell technology (LiSC™). These cost-effective columns are the first of their kind to be commercially available and can replace multiple HPLC columns, including reversed-phase (RP), AQ-type reversed-phase, polar-embedded group RP columns, normal-phase, cation-exchange, anion-exchange, ion-exclusion, and HILIC (Hydrophilic Interaction Liquid Chromatography) columns. By controlling just three orthogonal method parameters - buffer concentration, buffer pH, and organic modifier concentration - users can adjust the column properties with pinpoint precision to separate complex mixtures.

Method Parameters

Detection	UV Detection

Quelle: https://sielc.com/Application-HPLC-Separation-of-Aromatic-Compounds-PAH-on-Mixed-Mode-and-Reverse-Phase-Columns